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WILLOW CREEK AREA (OREGON) PRELIMINARY ECONOMIC REPORT AND ESTIMATE OF GROWTH 1960-2010

Public Health Service
Portland, Oregon

March 1962

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Columbia River Basin Project
For Water Supply and Water Quality Management

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U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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Region IX

Division of Water Supply and Pollution Control
570 Pittock Block
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DATE: March, 1962

Prepared by JHD

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Prepared by: Economic Studies Group
Water Supply and Pollution Control Program,
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March, 1962

PRELIMINARY ECONOMIC REPORT AND ESTIMATE OF GROWTH, 1960-2010

INTRODUCTION

Purpose of Analysis

This analysis is intended to provide a preliminary estimate of the economic potentials and economic growth of the subject area.

Definition of Area

A major part of Morrow County, Oregon, is drained by Willow Creek. For the purposes of this analysis, the study area includes all of Morrow County except an area in the north-east part of the county which contains the community of Boardman. This area is approximately defined by Census County Divisions as shown in Table II. It is assumed that, although these arbitrary boundaries do not exactly coincide with the sub-basin boundaries, the various discrepancies will be compensating in their net effect, and also that the area as defined constitutes an entity convenient for economic base analysis. Excluded from the projections are the areas on the shores of the Columbia River at the mouth of Willow Creek.

Study Period

The study period is the 50-year period ending in 2010. The year 1980 is taken as an interim point.

Limitations of Analysis

Two limitations apply to this study. The first is that it is intended only as a preliminary estimate of the outlook for the

subject area's growth. Subsequently, in connection with the Columbia River Basin Project for Water Supply and Water Quality Management, an analysis will be made on an industry-by-industry basis of the growth potential in the various sub-basins. At that time, this preliminary estimate will be reviewed, and revised if necessary.

The second limitation is that this study is intended for use particularly in assessing future water needs. Emphasis has been placed on the analysis of those industries which make heavy demands upon the water resource. Other industries have been considered only insofar as they may have a significant effect on future population. For this reason, this study is not submitted as a detailed industrial forecast.

PRESENT ECONOMIC BASE

Locational and Geographic Influences

The study area is located in a sparsely settled rural district. The climate and terrain are suitable for small grain production and cattle production. Although Willow Creek is a tributary of the Columbia River, the navigation and land transportation routes along the Columbia have little influence on the area. The study area is also adjacent to the former bombing range which is now being developed as an industrial park for the so-called space industries.

Land Uses

The area in the Willow Creek Basin is equivalent to 43 percent of the area of Morrow County and is almost entirely within the

county. Land in farms in Morrow County accounts for 84 percent of the county's land. The Willow Creek Basin is almost entirely contained in farms. For the purposes of this analysis, it is assumed that the land uses in the study area are the same in nature as the land in farms of Morrow County and equivalent in amount to 51 percent of the land in farms in Morrow County. Land uses for the study area are described in Table I.

Table I
Estimate of Major Land Uses in Willow Creek Basin
(Source: Derived from 1959 Census of Agriculture for Morrow County, Oregon)

	Acres
Land in farms	565,000
Cropland harvested	92,000
Cropland used for pasture	9,000
Cropland not harvested or pastured	92,000
Cultivated summer fallow	(83,000)
Woodland pastured	48,000
Other pasture	309,000
Irrigated land in farms	7,000

Water Uses

Willow Creek is not used as a water supply at this time except for irrigation. This use is discussed in the section on water quality.

The fish and wildlife uses of Willow Creek have been examined by the U. S. Fish and Wildlife Service. It is understood that only a small amount of recreational fishing now occurs in the stream.

There are no shore uses of the stream involving significant recreational or aesthetic benefits except for the highest

reaches of the stream in the Umatilla National Forest area. A forest park containing recreation facilities is located on the stream inside the national forest.

There is no water-based recreation use of the stream except for its highest reaches.

Population

The study area contained about 4,100 persons in 1960, of which 40 percent were in Heppner City. The distribution of this population is shown in Table II. The population of the county and of Heppner has remained almost unchanged since 1950. It is assumed that the study area population has followed the same trend.

Table II
Population in Willow Creek Area, 1960
(Source: U. S. Census of Population)

	Number of Inhabitants	
	Morrow County	Study Area
Boardman Division	1,145	380[1/]
Boardman City	(153)	
Irrigon City	(232)	
Heppner Division	2,517	2,517
Heppner City	(1,661)	
Ione-Lexington Division	1,209	1,209
Ione City	(350)	
Lexington Town	(240)	
TOTAL	4,871	4,106

1/ Study area portion of Boardman Division was computed by subtracting the population of Boardman and Irrigon cities from the Division and taking half the remainder.

Industry

The distribution of employment in Morrow County for 1950 and 1960 is shown in Table III. The only significantly sized manufacturing operation now in the county is the Kinzua Corporation wood products plant at Heppner with an employment of 80 persons.[2/] The agriculture of the county is primarily based on wheat production. In comparing the employment of the county for 1950 and 1960, it will be noticed that there has been a slight decline in total employment. There was an even greater decline in employment in agriculture, construction, and manufacturing. There was an employment increase in retail trade and other service industries.

Table III
Distribution of Employment in Morrow County, Oregon, in 1950
(Source: U. S. Census of Population, 1950 and 1960)

	1950		1960	
	Number	% of Total	Number	% of Total
Agriculture	815	40.8	635	34.6
Construction	194	9.7	95	5.2
Manufacturing (mainly wood products)	145	7.3	128	7.0
Retail Trade	257	12.9	319	17.4
Other (mainly service industries)	586	29.3	659	35.8
TOTAL	1,997	100.0	1,840	100.0

ESTIMATED GROWTH, 1960-2010

Factors Influencing Future Growth

The pattern of agriculture is not expected to change significantly in this area. The number of farms probably will not increase.

2/ Data are from the "1961 Directory of Oregon Manufacturers", by the Oregon State Department of Planning and Development.

In fact, there was a decline in number of farms in Morrow County of 16 percent in the decade 1950 - 1960. As far as can now be determined, a water control project on Willow Creek would not substantially alter the number of farms in the study area.

Other industrial developments in the study area are also not expected to change significantly. It is assumed that the industrial facilities proposed for the Boardman area, which is outside the study area, will have no direct effect on the study area. These facilities which the Boeing organization is considered likely to construct will probably immediately increase the population of the Boardman area by several hundred persons. The ultimate growth of the Boardman area, however, might be several times as great; and this could increase recreational needs in the vicinity.

Future Population

Based on developments which can now be anticipated, no change in population is forecast for the study area.

Future Land Uses

The only significant change in land use which can be anticipated is an increased amount of irrigation which would occur if a water control project is built on Willow Creek. There would also be the withdrawal of some land because of the reservoir which such a project would require.

Future Water Uses

Changes in water uses will depend upon the construction of a water control project. Such a project would make possible additional irrigation. In addition, if water quality was improved and a reservoir was made available, the stream would support certain types of water-based recreational activities.

It is understood that the U. S. Fish and Wildlife Service has forecast a considerable increase in the use of the stream (particularly the reservoir area) for recreational fishing with the construction of conservation pools. The reservoir area would also provide an opportunity for such water-based activities as boating and swimming. Based on the attendance records of other reservoirs in the area, the annual recreational attendance would be numbered in the thousands. Demand for recreation will increase even if population remains the same if historic trends of increasing leisure continue. The construction of the industrial facilities in the Boardman area also can be expected to increase the demand for water-based recreational facilities in the study area.